CONTENTS OF VOLUME 7

No. 1 January–February 1992

Papers in optoelectronics from China

1 **Editorial**

3 **Advances in optoelectronics in China**
Xiang L. Yang

11 **The analysis of the coupling efficiency between two Gaussian modes**
X. Senlu, X. Xiaoxin, W. Weizhi and S. Yonghang

19 **A new method for simplifying the transform between the near- and the far-field of single-mode fibres**
L. Jianxing and Z. Shuangbin

31 **The stable growth of single-crystal fibres**
Z. Lu, Z. Ding, J. Chen, X. Chen, L. Ye and X. Tang

41 **The research of Ti: $LiNbO_3$ 2 Δ-type crossing waveguides modulators**
L. Jining, C. Borong and S. Shouyao

53 **Measuring aberrations of a gradient-index rod lens with holographic shearing interferometry**
M. Hai, X. Jianping, Z. Hui, S. Yuesheng and C. Nong

57 **A narrow linewidth frequency-stabilized coherent optical source controlled by single-chip microcomputer**
H. Zhenrong and H. Jiangang

59 **High-speed 1·3 μm InGaAsP/InP mesa-structure edge-emitting LED**
Z. Wei, Z. Yushu, S. Jiawei, J. Enshun and G. Dingsan

63 **1·5 μm InGaAsP/InP RW–DFB laser**
W. Wei, Z. Jingyuan, T. Huiliang, M. Yubo, W. Xiaojie, M. Zhaohua, W. Liming, L. Hui, G. Junhua and G. Honghai

71 **MBE growth and quantum well lasers**
C. Lianghui, X. Junying, L. Likang, Z. Jingming, Z. An and F. F. Zheng

79 **1·3 μm and 1·5 μm InGaAsP/InP p-type InP substrate buried crescent (PBC) laser diodes with low threshold current and high efficiency**
P. Huaide, M. Xiaoyu, M. Chaohua, Z. Shenglian, W. Xiaojie and P. Guisheng

85 **Investigation of semiconductor CCTS bistable laser diodes**
W. Qiming, W. Ronghan, L. Shiming, L. Jianmeng, Z. Jianhe, L. Wenxu, Z. Quansheng and W. Shouwu

91 **Theoretical and experimental investigations on a novel semiconductor laser amplifier, with input and output sharing a single fibre**
H. Dexiu, L. Deming, Y. Siyuan, Z. Mi, H. Juxian and L. Xuefeng

103 **A fibre-optic lever and its application in a hydrophone**
A. Yin, S. Chen and D. Sun

111 **A closed-loop fibre-optic gyroscope with pulse-modulated light source**
Y.-Q. Liu and Z.-Q. Lin

117 **Investigation and application of an optical fibre liquid level sensor**
L. Ruifu, X. Xiaochun, J. Gong and Z. Yianyu

121 **Coupling loss analysis and GRIN lens application in a single-crystal optical fibre high-temperature thermometer**
W. H. Hu, C. F. Wang, W. Z. Tang, W. Zhou and J. H. Zhou

129 **A fibre-optics sensor for the measurement of stress in optical coatings**
S. Shouyao and Z. Jiu-Lin

133 **A Monte Carlo learning algorithm for clipped neural network model**
H. Wu-Qun and Z. Yan-Xin

139 **A 2-dimensional optical neural network with parallel thresholding and feedback**
Z. Yanxin and S. Yanping

No. 2 March–April 1992

147 **Editorial**

149 **Invited Article: Material properties and photorefractive behaviour of BSO family crystals**
L. Arizmendi, J. M. Cabrera and F. Agulló-López

181 **Temperature mapping of integrated circuits by photothermal laser scanning microscopy**
T. Damm, R. Gutewort, U. Stamm and K. Friedrich

189 **Versatile acousto-optical flexural wave-modulator, filter and frequency shifter in dual-core fibre**
H. Sabert, L. Dong and P. St. J. Russell

195 **Threshold analysis of vertical-cavity surface-emitting diode lasers**
W. Nakwaski

209 **As_2S_3 fibre for infrared image bundle**
J. Nishii, T. Yamashita, T. Tamagishi, C. Tanaka and H. Sone

217 **A liquid crystal cell based polarization-lock loop for use in coherent optical fibre communication systems**
A. S. Siddiqui and H. T. Sherief

221 **A fast polarization sampling system to characterize polarization noise in fibre transmission systems**
A. S. Siddiqui and Z. S. Siddiqui

225 **Network of microprocessors power-supplied by optical fibres: intelligent temperature and pressure sensors**
F. Picherit, F. Naulevade, J. C. Massaloux and J. M. Amouroux

237 **Middle infrared As–S, As–Se, Ge–As–Se chalcogenide glass fibres**
G. G. Devyatykh, M. F. Churbanov, I. V. Scripachev, E. M. Dianov and V. G. Plotnichenko

255 **Development of a soil testing method using laser holographic interferometry**
Duk-Won Park and Eui-Seok Oh

267 **Short communication: Heterodyne optical ASK and FSK system performance with convolutional coding**
R. Gangopadhyay and S. P. Majumder

275 **Short communication: Measurement of high nonresonant third-order nonlinearity in MP-PPV waveguides**
U. Bartuch, A. Bräuer, P. Dannberg, H.-H. Hörhold and D. Raabe

281 **Short communication: Fast optoelectronic switching driven by optical waves**
B. Götz, W. Karthe and B. Martin

285 **Short communication: An experimental study of mode coupling in few-mode fibre-optic couplers by means of selective excitation**
T. A. Eftimov

295 **Book reviews**

299 **Announcement**

No. 3 May–June 1992

301 **Invited Paper: Bistable laser diodes and their applications for photonic switching**
H. Kawaguchi

349 **Micro-optic and fuse-and-pull: Two techniques for the realization of optical fibre WDM**
R. Falciai, A. Schena and F. Cosi

359 **InGaAlP visible-light laser diodes**
G. Hatakoshi and Y. Uematsu

375 **Radiation thermometer and gas sensor using chalcogenide glass fibres**
M. Saito, M. Miyagi, T. Kuritani and F. Tanei

385 **Fibre optic photoelastic sensors**
G. Martens

409 **Design considerations of a dual-mode/single-mode waveguide modal filter**
S. Ghadirli, A. Kumar and K. Thyagarajan

417 **Simple coefficients for the length dependence of the effective cut-off wavelength in optical single-mode fibres**
H. Renner

425 **Reliability of the bending technique for measuring the effective cut-off wavelength in depressed-cladding fibres**
H. Renner

429 **Optical-fibre sensor for the study of structural defects**
P. K. C. Pillai, T. C. Goel, N. K. Pandey and S. K. Nijhawan

437 **Coplanar grating lens in AlGaAs waveguide**
S. Ura, T. Suhara and H. Nishihara

443 **Fibre-optic pH-sensor**
A. Dybko, R. S. Romaniuk, J. Maciejewski and Z. Brzózka

449 **Short communication: A humidity sensor using a wavelength-dependent holographic filter with fibre optic links**
R. C. Spooncer, F. A. Al-Ramadhan and B. E. Jones

No. 4 July–August 1992

453 **Fibre acoustic modes and stimulated Brillouin scattering**
W. M. Henry

479 **Circularly-birefringent optical fibres**
I. J. Lalov, A. P. Shivarova and P. P. Todorov

491 **Switching voltage of two-mode-interference (BOA) X-cut Ti:$LiNbO_3$ switches**
J. Čtyroký, J. Janta, J. Prokš and J. Schröfel

497 **Diffraction by the periodic groove structure formed on a thin-film waveguide**
M. Tomita

519 **Proton exchanged and post-exchange annealed $LiTaO_3$ waveguides**
C. C. Ziling, V. V. Atuchin, I. Savatinova and M. Kuneva

533 **Bistable behaviour in wavelength of a tunable optical waveguide directional coupler filter with feedback**
A. Gh. Podoleanu and L. I. Plesea

547 **A compensation technique for amplitude optical fibre sensors**
F. Xiao-Jun, W. Anbo, H. Shi and L. Jun-Xiu

551 **Determination of thermo-optical and electro-optical coefficients using waveguide resonators**
Th. Richter and R. Müller

557 **Characterization of proton exchanged optical waveguides in *z* cut $LiTaO_3$**
T. Maciak

565 **Joint between polarization-preserving fibres based on birefringence phase modulation**
W. Jin, D. Uttamchandani, B. Culshaw and W. Zhang

573 **Book reviews**

No. 5 September–October 1992

575 **Diffraction synchronization of gain-guided arrays of diode lasers**
W. Nakwaski

589 **A novel optoelectronic sampling technique for time division multiple access network applications**
M. Yaseen and S. D. Walker

599 **Determination of the electromagnetic field in curved dielectric waveguides with elliptical cross-section**
H. T. Anastassiou, A. G. Papayannakis and E. E. Kriezis

607 **GRIN optics and its application in optical connections**
C. Gómez-Reino

681 **Short communication: A stimulated near-infrared continuum in an optical fibre taper used as a direct laser-cavity output**
I. Ilev, I. Koprinkov, T. Kortenski, Yo. Basheva and I. Boianov

No. 6 November–December 1992

687 **The application of glass transition effects to optical fibre sensors**
P. C. Hills and A. D. Stuart

699 **Operating lifetime of semiconductor laser optical amplifiers**
M. S. Demokan

705 **Polarised finite-difference analysis of D-fibre and application for chemical sensing**
F. A. Muhammad and G. Stewart

723 **Matrix description of mode coupling along parallel fibre-optic structures**
T. A. Eftimov

753 **Microbending in optical fibres utilized as a simple and accurate low-temperature sensor**
O. Lumholt, A. Bjarklev, S. Dahl-Petersen, C. C. Larsen, J. H. Povlsen, T. P. Rasmussen and K. Rottwitt

759 **Quantum non-demolition measurement of the photon number by counter-propagating beams in a single-mode optical fibre**
J. Zhang, I. Paulicka and V. Sochor

765 **Studies of a photoelastic fibre optic pressure sensor**
X. J. Fang, X. D. Jin, T. Jang and J. X. Lin

773 **Optical surface roughnes measurement using an image speckle pattern at defocus planes**
N. A. Russo and E. E.Sicre

779 **A high-frequency sinusoidal phase modulation interferometer for displacement measurements**
F. Docchio and U. Minoni

789 **Book reviews**

792 **Erratum**

793 **Index of authors**